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January 17, 2000

OhioEPA
Division of Surface Water
Lazarus Government Center
P.O. Box 1049
Columbus, OH 43216-1049

Subject: PTI Application for NPDES Outfall Re-Route
Detrex Corporation – Ashtabula, Ohio
NPDES Permit No. 3IF00017*HD

Ladies and Gentlemen:

Enclosed please find a Permit-to-Install (PTI) application and a check for $525.00 made payable to the Treasurer, State of Ohio. This PTI provides plans, specifications and the requisite application forms for a proposed re-route of the existing NPDES outfall.

This work is associated with source control activities at the Fields Brook Superfund Site. In order to maintain the overall schedule of this project, Detrex requests that OhioEPA review and approve this application in a timely fashion.

Should you have any questions regarding this submittal, please do not hesitate to contact URS Greiner Woodward Clyde or Mr. Tom Doll of Detrex Corporation at (440) 997-6131.

Sincerely,

David A. Shaper, P.E.
Sr. Project Engineer

cc: Tom Doll – Detrex Corporation
Tom Steib – Detrex Corporation
Erm Gomes – OhioEPA, DSW, NEDO
Terese Van Donsel – USEPA Region V

Section 1

A

Ohio Environmental Protection Agency

Permit to Install/Plan Approval Application

FOR AGENCY USE ONLY

Date Received: _____ Application Number: _____ Basin Code: _____

Check Date: _____ Check Number: _____ Check Amount: $0.00

1. Project Name: NPDES Outfall Re-Route, Detrex Corporation

2. Applicant:

Name: Detrex Corporation

Mailing Address: P.O. Box 5111

City: Southfield State: MI Zip: 48086-5111

Contact Name: Tom Stieb Title:

Phone: (800) 349 - 2708 Fax: (440) 992 - 2904

3. Application/Plans Prepared by:

Name: URSGWC

Mailing Address: 30775 Bainbridge Road, #200

City: Solon State: OH Zip: 44139-

Contact Name: David A. Shaper Title: Senior Project Engineer

Phone: (440) 349 - 2708 Fax: (440) 349 - 1514

4. Billing Address (if different from Applicant):

Name: Detrex Corporation

Mailing Address: P.O. Box 5111

City: Southfield State: MI Zip: 48086-5111

Contact Name: Tom Stieb Title:

Phone: (800) 349 - 2708 Fax: (440) 992 - 2904

5. Owner (if different from Applicant):

Name: Detrex Corporation

Mailing Address: P.O. Box 5111

City: Southfield State: MI Zip: 48086-5111

Contact Name: Tom Stieb Title:

Phone: (800) 349 - 2708 Fax: (440) 992 - 2904

6. Project Location:

Street Address or Location Description: 1100 North State Road

County: Ashtabula Township/Municipality: Ashtabula

Latitude: 41° 53' 17" Longitude: 80° 46' 12" Method of Determination: USGS Quad

7. Brief Project Description:

Detrex shares responsibility for the North Sewer Source Area of the Fields Brook Superfund Project, which is administered by USEPA Region V. The NPDES Outfall currently discharges to the North Sewer, which discharges to Fields Brook. The North Sewer will be plugged as part of the remedial action. Detrex must re-route the outfall to discharge directly to Fields Brook.

Will five acres or more be distrubed during construction on this project? ○ Yes ● No

8. A. Is this application part of a combined permit to install application? (e.g. Air+Water) ○ Yes ● No

9. Compliance Status

A. Does this facility have an NPDES permit? ● Yes No

If yes, permit numbers: 3IF00017*HD

B. Is this application filed in compliance with findings and orders, a consent decree, and/or NPDES permit schedule?

○ Yes Effective date of the document containing the schedule: _____

● No

10. Have pollution prevention concepts been considered for this project? ○ Yes ● No

If yes, please describe:

11. Estimated Project Schedule:

Beginning construction date: 4/1/00

Ending construction date: 5/1/00

Beginning operation date: 5/1/00

12. Project Cost:

Installation/Construction Cost: $50,000.00

(Mark one): ○ Actual ○ Bid ● Estimate

Annual Operation/Maintenance Cost (if applicable - this project only):

Are Water Pollution Control Loan Funds going to be used for this project? ○ Yes ● No

If no, Funding Source: Applicant

13. Attachments. The following are include in this application package (indicate how many copies of each are provided):

	Engineering Report
2	Engineering Specifications
	Management Plan
	Hydrogeologic Site Investigation Repo
2	PTI Application Forms A1 & B5
4	Detail Plans

14. Form B Submission *(check all that apply)*

	Form
☐ Sewer and Pump Construction	B1

☐ Sewer and Pump Construction	B1
☐ On-Site Sanitary Waste Disposal	B2
☐ Wastewater Treatment Plant Less Than 1000,000 GPD	B3
☐ Wastewater Treatment Plant Greater Than or Equal to 100,000 GPD and all Pond Systems	B4
☐ Industrial Direct Discharger Facility	B5
☐ Industrial Indirect Discharger Facility	B6
☐ Underground Storage Tank Remediation	B7
☐ Livestock Waste	B8
☐ Land Application or Sludge Management Plan	B9

15. Fee Calculations:

Permit to Install (maximum total fee $15,100)

a. Application fee:	$100.00
b. Plan review fee:	$100.00
c. Plan review fee (installation/construction cost x 0.0065):	$325.00
d. Total Fee (a + b + c):	$525.00

Land Application*/Livestock Plan Approval

a. Application fee:	$100.00
b. Plan review fee:	$100.00
c. Total fee (a + b):	$200.00

* No separate fee is needed for land application of treated wastewater if the management plan is submitted as part of the PTI application for system installation.

16. Signature of the Applicant: (see Ohio Administrative Code 3745-31-04)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision and that all the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are substantial penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Typed name: Tom Stieb

Title: Operations Manager

Signature: Thomas W. Stieb

Date: 11/19/00

Supplement to Form A

B5

Ohio Environmental Protection Agency

Permit to Install/Plan Approval Application
Industrial Direct Dischargers

Applicant: Detrex Corporation

Facility owner: Detrex Corporation

Application/Plans prepared by: URSGWC

Project name: NPDES Outfall Re-Route, Detrex Corporat

1. Effluent quality of discharge from proposed treatment facility or project (concentration and loadings required).

Parameter	30 Day Average				Daily Maximum			
	Conc.	Units	Load	Units	Conc.	Units	Load	Units
Selenium, Total	5.0000	ug/l	0.0275	kg/day	20.0000	ug/l	0.1102	kg/day
Chlorine, Total					0.0190	mg/l		
Acute Toxicity,					1.0000	TU		
Mercury, Total	0.0120	ug/l	0.0001	kg/day	1.0500	ug/l	0.0058	kg/day
Zinc, Total	65.0000	ug/l	0.3580	kg/day	116.0000	ug/l	0.6390	kg/day
Acute Toxicity,					1.0000	TU		
Residual, Total					697.0000	mg/l	840.0000	kg/day
Oil & Grease, T	2.0000	mg/l	11.0200	kg/day	4.0000	mg/l	22.0400	kg/day
Cadmium, Total	2.0000	ug/l	0.0110	kg/day	8.9000	ug/l	0.0490	kg/day
lver, Total	1.3000	ug/l	0.0070	kg/day	3.4000	ug/l	0.0187	kg/day
opper, Total	18.0000	ug/l	0.0992	kg/day	27.0000	ug/l	0.1490	kg/day

Load calculations completed by using 1.4576 MGD flow.

2. List the hydraulic design capacity of the major components of the wastewater treatment system

Component	Design Capacity (gpm)
1300 ft 15-inch gravity PVC sewer	1,000.00

3. List the sequence of receiving streams from initial discharge point up to the first named stream:

Outfall 002 discharges to Fields Brook. Fields Brook discharges to the Ashtabula River.

4. Is this facility regulated by an NPDES permit? ● Yes ○ No

Permit number: OH 31F001 7*HD

5. Contact person responsible for the technical aspects of this project:

Name: David A. Shaper Phone: (440) 349-2708

Title: Senior Project Engineer Company: URSGWC

6. If the proposed wastewater treatment system is for a new facility or operation, has a site inspection been conducted by and Ohio EPA, Division of Surface Water representative? ○ Yes ○ No ● N/A

7. Submittals

This application must include the following unless otherwise directed by the Ohio EPA district office:

This application must include the following unless otherwise directed by the Ohio EPA district office:

- X Four copies of the detail plans which include site plans, vicinity map, schematic diagrams, plan views, elevation views and cross - sectional views necessary to evaluate the processes
- X Two copies of complete technical specifications
- X Two copies of the Permit to Install/Plan Approval Application including Forms A and B5
- X Fee check made payable to "Treasurer, State of Ohio"

Section 2

GENERAL INFORMATION

1. All work shall be completed in compliance with all applicable federal, state, and local regulations.

2. The contractor shall be responsible for development of an erosion control plan and defining any required permitting during construction activities.

3. All units shall be installed in accordance with manufacturer recommendations.

END OF GENERAL INFORMATION

GRAVITY SEWER PIPE

1. **Material** The thermoplastic material shall be a rigid polyvinyl chloride (PVC) compound and shall meet the requirements of ASTM Specification D1784, for a minimum cell classification of 12454B or 12454C. The fittings shall be made of PVC compound having a cell classification of 12454B, 12454C, or 13343C, as defined in ASTM D1784, or approved equivilent.

2. **Manufacture** The PVC sewer pipe shall be manufactured per ASTM F949 with a pipe stiffness (tested in accordance with ASTM D2412) of 50 psi. The shall be no evidence of splitting, cracking, or breaking when the pipe is tested in accordance with ASTM D2412 at 60% flattening. Pipe dimensions shall meet the requirements given in ASTM F949 when measured in accordance with ASTM D2122.

3. **Joints** Gasketed pipe joints shall show no leakage when tested in accordance with ASTM D3212. Elastomeric seals (gaskets) shall meet the requirements of ASTM F477.

4. **Installation** Installation of the sewer pipe shall be in accordance with the project plans and ASTM D2321.

END OF GRAVITY SEWER PIPE

TESTING

Contractor shall perform air pressure testing of installed gravity piping in accordance with ASTM F1417.

Contractor shall complete air pressure testing of installed pressure piping in accordance with AWWA-C600 or UNI-B-6-90, whichever is stricter.

END OF TESTING

ABANDONMENT OF EXISTING STRUCTURES

1. **Abandonment of Existing Sewers** The existing outfall will be abandoned in place by plugging the opening with concrete grout. The area will be restored to existing conditions in conjunction with the installation of the new sewer pipe.

TRENCHING AND BACKFILLING

Please see typical trench detail on project sheet C-5S.

1. **Fill Materials** Contractor shall verify that all bedding, backfill, and topsoil materials to be used are acceptable.

2. **Preparation** Contractor shall identify required lines, contours, and datum. Known locations of utilities shall be provided by the owner's representative. However, additional unknown utilities may exist. It is the Contractor's responsibility to identify, maintain, and protect existing utilities that pass through the work area, both above and below ground. Contractor will protect existing features that are to remain from excavation equipment and vehicular traffic. Topsoil will be stripped and stockpiled for re-use.

3. **Excavation** Contractor will excavate subsoil to required depth and grade. Trenches will be cut sufficiently wide to enable installation of the utilities and allow inspection. Normal trench width below the top of the pipe will be 12 inches plus the nominal pipe diameter. Trench walls shall not be undercut. All excavation work will be in compliance with applicable OSHA standards.

4. **Undesirable Materials** All undesirable materials below the trench bottom, such as organic soils that can not support the pipe, will be removed and replaced with crushed stone or other suitable bedding.

5. **Bedding** Pipe shall be supported during placement and compaction of bedding. Pipe will not be placed over excessively soft sub-grade. Subgrade deemed unacceptable by the engineer shall be over-excavated and replaced with protective cover material compacted to ninety percent of dry density in accordance with ASTM D 698 (Standard Proctor). Bedding shall be installed in accordance with detail on project sheet C-5S.

6. **Granular Backfill** Granular backfill (fine to coarse sand) will be placed a minimum of 12 inches above and around the crown of the pipe. Backfill shall be placed in maximum 6-inch lifts, and compacted in place to 95% of maximum dry density (ASTM D698). The contractor shall use care not to "float" the pipe during bedding material placement.

7. **Trench Backfill** Protective cover material will be placed in maximum 12-inch loose lifts. The protective cover material shall be placed and compacted to a minimum of 90% dry density determined in accordance with ASTM D 698 (Standard Proctor). The moisture content of the backfill will be maintained as required to attain required compaction density. Backfill will not be installed over wet or spongy ground. Contractor will provide material to stabilize subgrade as required. Trenches will be backfilled to original contours unless otherwise specified in the drawings. Excess backfill will be stockpiled in an area designated by the owner's representative.

8. **Topsoil** Topsoil will be placed in minimum 6-inch loose lifts. The area will be seeded with species similar to the surrounding area.

9. **Pavement** All asphalt and concrete pavement shall be saw cut and repaved to match existing pavement. A minimum of 18-inches of ODOT Type 304 backfill shall be installed and compacted to 95% maximum density. Concrete pavement shall be pinned to existing pavement using #5 steel reinforcement rods at 2 foot centers. Concrete shall be further reinforced with ¼-inch wire mesh.

END OF TRENCHING AND BACKFILLING

EARTHWORK

1. General fill and topsoil shall be obtained from an on-site source designated by the owner's representative. Topsoil may be adequate as backfill.

2. General fill should be natural on-site soils classified in ASTM 2487 as CL or CL-ML, free from frozen material, stones exceeding two inches in any dimension, significant organic matter and debris.

3. General fill materials shall meet the following requirements:

Property	Standard	Test Value
Plasticity Index	ASTM D4318	30(max)
Liquid Limit	ASTM D4318	50(max)

Gradation

Sieve Size	% Passing
2 inch	100
#4	80 to100
#200	10 to 100

4. The Contractor may be required to submit to the Engineer grain size analyses and Atterburg limits on soil samples collected from the on-site areas designated by the owner's representative.

5. Excavations and fills shall be made to the elevations, contours and dimensions specified in the drawings.

6. The Contractor shall at all times provide means and devices for the removal of all water entering the excavations in such a manner as shall not interfere with the progress of the work.

7. General fill shall be used for all backfill. Topsoil (top 6 inches) from an on-site source designated by the owner's representative shall be used as supplemental topsoil if required.

8. General fill for all general earthworks shall be placed in 12-inch lifts, unless otherwise designated by the owner's representative. General fill shall be placed in a uniform lift and compacted to the degree specified by equipment suitable for material encountered prior to the placement of succeeding lifts. Compaction of each lift shall be tested and confirmed to have the correct compaction (where required) before successive lifts are applied.

9. During the earthwork, the Contractor shall add sufficient water during the compaction effort to assure proper soil compaction, where required. If, due to rain or other causes, the material exceeds the moisture content for satisfactory compaction, it shall be allowed to dry before compaction or filling efforts are resumed.

10. Field quality assurance shall include visual field inspection by the owner's representative.

11. In the event that a portion of earthen material does not meet the criteria, the Contractor shall re-compact the fill to the areal limits defined by other tests meeting the criteria, and retest. In the event of a subsequent failure, the entire area failing the second test shall be reworked or removed and replaced.

END OF EARTHWORK

CAST-IN-PLACE CONCRETE

1. Cast-in-place concrete shall be required for the thrust blocks, the roadway repair, and the letdown structure.

2. Cast-in-place concrete shall Portland Cement Type II as specified in ASTM 150.

3. Concrete mix shall conform to the following, or approved equal:

    - Mixing water shall be potable and free of deleterious materials such as acids, alkalies, salts, oils, and organic materials. The water to cement ratio range is 0.60 – 0.65:1.0. The owner will be provided with a copy of the mix specification for approval prior to use.
    - Fine aggregate shall be a natural sand, or a sand manufactured from stone.
    - The total compressive strength of the concrete mix shall be 3000 psi.

4. Contractor shall construct forms, as appropriate, to cast the concrete items in accordance with the project drawings.

5. Certain aspects of cast-in-place concrete shall be field engineered.

END OF CAST-IN-PLACE CONCRETE

Section 3

SDMS US EPA REGION V
FORMAT- OVERSIZED - 5
IMAGERY INSERT FORM

The item(s) listed below are not available in SDMS. In order to view original document or document pages, contact the Superfund Records Center.

SITE NAME	**Fields Brook (OH)**		
DOC ID #	**142649**		
DESCRIPTION OF ITEM(S)	**Proposed Sewer Rerouting Design**		
REASON WHY UNSCANNABLE	**_X_ OVERSIZED**	**OR**	**___ FORMAT**
DATE OF ITEM(S)	**1/18/00**		
NO. OF ITEMS	**4**		
PHASE	**Remediation**		
PRP			
PHASE (AR DOCUMENTS ONLY)	**___ Remedial ___ Removal ___ Deletion Docket ___ AR ___ Original ____ Update # ___ Volume ____ of ___**		
O.U.			
LOCATION	**Box # _2_ Folder # _3_ Subsection _K4_**		
COMMENT(S)			